Preference Assessments: Why They are Important & How to do Them

Ruth M. DeBar, Ph.D., BCBA-D

Objectives

• Identify reasons it is important to assess preference

• To distinguish between different types of preference assessments and different procedures for implementing each

• To identify variables to consider

• Extensions of preference

Challenges Assessing Preference for Learners with ASD

• Communication deficits

• May have restricted interests

• May be exposed environment which limits familiarity with novel items

Piazza, Fale, Haviland & Bliley-Smith (1999)
Why is Preference of Reinforcers Important for Learners with ASD?

- The effectiveness of skill acquisition and behavior reduction programs depend the identification and the implementation of potent reinforcers!

Preference Assessments

- Indirect
  - Surveys & Interviews

- Direct
  - Preference Directly measured
  - Examples:
    - Single-stimulus, paired-preference, MSWO, duration-based

Why not simply ask?

- Identifying commonly accessed items
- Overlook idiosyncratic preferences
- Incorrect selection
- Characteristics that impede accuracy of respondents reporting

Canella-Malone, Sabieley, Jimenez, & Miller (2013)
Indirect Preference Assessments

- Examples: Interviews & surveys
  - Pros
    - Easy & quick
  - Cons
    - Not as accurate as empirical preference assessments

Direct Assessments in Identifying Stimulus Preference

- Single-stimulus
- Paired Stimulus
- Multiple Stimulus Without Replacement (MSWO)
- Duration-based preference assessment
- Free-operant
Single-stimulus Assessment

• In general,
  – Identify items to be assessed
  – Present one item at a time
  – Allow learner 5 seconds to approach item
  – If no approach for the 1st presentation, record No Approach on data sheet, represent, and prompt engagement for 5 seconds
  – If learner approaches item after representing it, permit engagement

Single-stimulus Assessment

• In general,
  – If no approach for the 2nd presentation, record No Approach on data sheet and move onto next trial
  – If learner emits any refusal behavior or problem upon presentation of stimulus, remove item and discontinue its use

Single-stimulus Presentation

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fritos</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Chip</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Cookie</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Ritz</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
Single-stimulus presentation

- Benefits:
  - Quick & easy
  - Good method to introduce novel stimuli
  - Does not require a scanning repertoire nor choice behavior

- Limitations:
  - May overestimate preference
  - Does not generate a hierarchy of preference

Paired-Stimulus Preference Assessment

- Gather your data sheet and your items
- Present both items simultaneously and state “Pick one.”
- Once your learner has selected an item, allow 10-30 seconds to engage with it.

Paired-Stimulus Preference Assessment

- If your learner does not make a response,
  - represent each item singly for 5 seconds
  - Represent choice
  - If your learner selects 1 of the 2, allow engagement
Paired-Stimulus Preference Assessment

- If your learner reaches for both items, block access and represent trial
- Run no more than 20-25 trials at a time
- Discontinue if your learner makes No Response across 3 consecutive trials

Paired Preference Assessment

<table>
<thead>
<tr>
<th>Stimuli</th>
<th>Trial Left</th>
<th>Trial Right</th>
<th>NR (No-response) or R (Refusal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Robot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Drum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Ball Toy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Hurricane</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ipad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. See n say</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Playdough</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Paired-Stimulus Preference Assessment

![Graph showing preference](graph.png)
Paired-Stimulus Preference Assessment

- Benefits:
  - More accurate estimate of preference than Single-stimulus preference assessment
  - Generates a hierarchy of preference

- Limitations:
  - Time consuming
  - Requires that an item be removed after presentation, which can be problematic

Multiple Stimulus Without Replacement (MSWO)

- General procedures:
  - Sit across the learner
  - Present 5-7 items (Place middle or 4th item in front of the learner)
  - Say “Pick one,” or “Choose”

- MSWO
  - If participant:
    • Selects: allow engagement for 10-30 sec or until consumed
    • Approached more than 1 item, block

  - Otherwise,
    • Record selection and systematically shift items
    • Repeat until all items selected
    • If no items are selected, represent opportunity
    • If no selection for 2 consecutive trials, discontinue.
    • Repeat for 3-7 sessions
MSWO

1. Turtle Shape Sorter
2. Don't Break the Ice
3. Farm House
4. Work Bench
5. Race Track

<table>
<thead>
<tr>
<th>Session</th>
<th>Item selected</th>
<th>Notes</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial 1</td>
<td>Don’t Break the Ice</td>
<td></td>
<td>1-2-3-4-5</td>
</tr>
<tr>
<td>Trial 2</td>
<td>Work Bench</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 3</td>
<td>Turtle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 4</td>
<td>Farm House</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial 5</td>
<td>Race Track</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data Calculation

The number of times selected/the number of times the item was presented

<table>
<thead>
<tr>
<th>Item</th>
<th>Formula</th>
<th>% Approached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t break the Ice</td>
<td>1/1</td>
<td>100%</td>
</tr>
<tr>
<td>Workbench and hammer</td>
<td>1/2</td>
<td>50%</td>
</tr>
<tr>
<td>Turtle shape sorter</td>
<td>1/3</td>
<td>33%</td>
</tr>
<tr>
<td>Race track</td>
<td>1/4</td>
<td>25%</td>
</tr>
</tbody>
</table>

- Average across all sessions

Results

[Graph showing the percentage selected for each item]
MSWO

- Benefits:
  - More accurate than Single-stimulus preference assessment
  - Easier to and less time consuming than paired-preference assessment
- Limitations:
  - Session behavior is important:
    - Scanning
    - Attending
    - Leaving item on table between trials

Single-stimulus engagement

- Present one item at a time
- Engagement with item is measured for a pre-determined interval
  - 2 min (e.g., DeLeon, Iwata, Conners, Wallace, 1999)
- Calculate the percent engagement
  - Total number of seconds engaged/total number of seconds with the item

Results

![Graph showing percent engaged for Alligator Xylophone and Electronic Drum]
Single-stimulus engagement

• Benefits:
  – Take less time to identify preferred stimuli
  – Can include open-ended activities
  – May be best for learners who have deficits in choice making behavior

Single-stimulus engagement

• Limitations:
  – Some participants may approach/engage with all items
  – Limited utility for edibles

Free-operant Preference Assessment

• Allow learner to explore items within an environment
• Teacher/clinician does not present and/or manipulate presentation of materials
• Record duration and frequency of which items/activities engaged
Free-operant Preference Assessment

- Quick & easy
- Not withholding, removing, or manipulating stimuli to be assessed

When Should Preferences be Conducted?

- Should be a standard part of an individual’s program
  - Minimally conducted annually
  - Mini-assessments can be conducted daily
- More often:
  - If student has a small pool of reinforcers
  - Lack of progress with skill acquisition programs
Prior to beginning. . . .

- Consider the type most appropriate for your learner
- Gather information
- Gather Stimuli
- Conduct your preference assessment
- Calculate results

Clinical guidelines. . .

- Can the student choose?
- NO, Single-stimulus assessment
- Yes, Paired-stimulus MSWO
Terminology

- **Reinforcer** - A stimulus change that increases the future frequency of behavior that immediately precedes it. (Cooper, Heron, & Heward, 2007)
- **Highly preferred stimuli** - Stimuli approached or engaged most often.

Reinforcer Assessments

- Direct methods used to present a contingent stimulus on a simple, low effort response while measuring the effects on rate of responding (Cooper, Heron, & Heward, 2007)

Preference for Social Consequences

- Rapid assessment to evaluate preference and reinforcing effectiveness of social reinforcers
- Includes a low effort, mastered response
- Includes a control (no consequence)
- Potential social reinforcer assessed 1 min

Smaby, MacDonald, Ahearn, & Dube (2007)
Preferred Social Consequences

• Advantages
  – Great way to assess sensitivity to social consequences
  – Simultaneously identified preference and reinforcing effects
  – It is quick

Limitations:
  – It is quick
  – Additional research

Choice is Clinically Important

• “Choice is a central principle in the delivery of ethical behavioral services. . . . The point is . . . a client must have alternatives, must be able to perform each alternative, and must be able to experience the natural consequence of the chosen alternative.” (p.674)

Clinical Applications of Choice

Research supports that individuals can indicate preference when presented with choice-making opportunities
  – Interventions
  – Selection of AAC devices
  – Leisure activities
  – Instructional activities
  – Vocational tasks
In closing. . .

- Assessing preference is paramount to effective programing
- Varies preference assessment methods exist
- Type of assessment type should be client-driven
- Preference and choice can be utilized in practical ways

In closing. . .

- Consider the role of motivating operations, variety, and shifts over time
- Additional research to better inform clinical practice:
  - Social reinforcers
  - Choice of interventions and other areas

Thank you for your attention!

- Any further questions?
- Email: rdebar@caldwell.edu
- Special thank you to future behavior analysts 😊
References


References